

amendments introduce no new matter within the meaning of 35 U.S.C. § 132.

Rejection under 35 U.S.C. § 103

The Examiner rejected claims 1-8 as obvious over U.S. Patent No. 5,777,634 to Okamura et al. in view of Japanese patent publication JP-11-0348385 to Mitsuhisa.

RESPONSE

Independent claims 1 and 7 have been amended by this Response and Amendment to further differentiate the claimed invention over the cited prior art. As amended the rejections are respectfully traversed.

Applicant traverses the rejections because all three prongs for a *prima facie* case of obviousness have not been established for each of the rejections. Specifically, as amended all the claim limitations are not present in the cited references and one of ordinary skill in the art would have no motivation to modify the cited references into the present invention.

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all the claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016,

1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

The present invention is related to an improved error handling scheme as combined with the provisions of a plurality of image formation units each of which serves to perform a printing operation on a printing sheet. Particularly, the improvement point resides in a control unit which serves to judge whether or not a current error as detected by the error detection unit is an error with which the printing operation of at least one of the image formation units can be continued while the printing operation of another of the image formation units must be halted; or an error with which the printing operation of **all** of the image formation units must be halted, as recited in the claims as herein amended. This judgment is not described in the cited references.

Claims 1, as amended, is directed to a printing machine apparatus having a plurality of image formation units each of which serves to perform a printing operation on a printing sheet. A paper feed unit serves to supply the image formation units with printing sheets. A printed sheet transportation unit serves to transport the printing sheet having been printed from the image formation unit to a common output location. An error detection unit serves to detect an error occurring in the printing machine.

The printing machine has a computer readable ROM has an error classified table stored therein in which errors in the printing

machine are classified. The classified table includes at least one error on an occurrence of which a printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted; and at least one error on an occurrence of which printing operations of **all** of the image formation units must be halted. The printing machine has a control unit comprising a CPU connected to the ROM. The CPU has an error judgement computer program executed thereon which computer program judges whether or not a detected error is an error with which a printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted; or an error with which printing operations of **all** of the image formation units must be halted.

Claim 7 has been similarly amended and now claims a method of reporting an error in the printing machine including an error detecting step of detecting an error which occurs in the printing machine; an error look-up step of looking up the error detected in the error detecting step in an error classified table stored on a ROM; and an error judging step of judging whether or not the detected error is an error with which the printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted or an error with which the printing operation of **all** of the

image formation units must be halted.

Applicant respectfully submits that the Okamura '634 patent does not disclose a plurality of printing units as claimed in each of claims 1 and 7. Consequently, the Okamura patent cannot and therefore does not disclose a computer readable ROM has an error classified table stored therein in which errors in the printing machine are classified, the classified table including at least one error on an occurrence of which a printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted; and at least one error on an occurrence of which printing operations of **all** of the image formation units must be halted. The Okamura '634 patent similarly does not disclose that the printing machine has a control unit comprising a CPU connected to the ROM, the CPU having an error judgement computer program executed thereon which computer program judges whether or not a detected error is an error with which a printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted; or an error with which printing operations of **all** of the image formation units must be halted, as claimed in claims 1 and 7.

Applicant further submits that the cited Japanese '385 patent publication to Mitsuhsa similarly does not disclose a computer readable ROM has an error classified table stored therein in which

errors in the printing machine are classified, the classified table including at least one error on an occurrence of which a printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted; and at least one error on an occurrence of which printing operations of **all** of the image formation units must be halted. The '385 patent publication to Mitsuhsa similarly does not disclose that the printing machine has a control unit comprising a CPU connected to the ROM, the CPU having an error judgement computer program executed thereon which computer program judges whether or not a detected error is an error with which a printing operation of at least one of the image formation units can be continued while a printing operation of another of the image formation units must be halted; or an error with which printing operations of **all** of the image formation units must be halted, as claimed in claims 1 and 7.

Thus, independent claims 1 and 7 are asserted to be patentable over the cited references. Claims 2-6 and newly submitted claim 9, dependent from claim 1, and claim 8, dependent from claim 7, are asserted to be patentable over the cited references for at least the same reasons that claims 1 and 7 are patentable thereover.

Accordingly, reconsideration and withdrawal of the rejections is respectfully requested.

CONCLUSION


In light of the foregoing, Applicant submits that the application is in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

Respectfully submitted,

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Attachment "A"
(Marked-Up Copy of Amended Claims)

1. (Twice Amended) A printing machine comprising:
 - a plurality of image formation units each of which serves to perform a printing operation on a printing sheet;
 - a paper feed unit which serves to supply said image formation units with printing sheets;
 - a printed sheet transportation unit which serves to transport the printing sheets having been printed from said image formation units to a common output location;
 - an error detection unit which serves to detect an error occurring in said printing machine;
 - a [storage device] computer readable ROM having [which serves to store] an error classified table stored therein in which [possible] errors [occurring] in said printing machine are classified, said classified table including [into] at least one error [with] on an occurrence of which [the] a printing operation of at least one of said image formation units can be continued while a printing operation of another of said image formation units must be halted, and at least one error [with] on an occurrence of which [the] printing operations of all of said image formation units must be halted; and
 - a control unit comprising a CPU connected to said ROM, said CPU having an error judgement computer program executed thereon

which [serves to] computer program judges whether or not a [current error as] detected [by said] error [detection unit] is an error with which [the] a printing operation of at least one of said image formation units can be continued while a printing operation of another of said image formation units must be halted, or an error with which [the] printing operations of all of said image formation units [can not] must be [continued] halted.

2. (Amended) The printing machine as claimed in claim 1 wherein said control unit is capable of taking control of said printing machine in order to continue, [said printing operation] without suspending, said printing operation when said control unit judges occurrence of an error with which said printing operation of at least one of said image formation units can be continued.

3. (Amended) The printing machine as claimed in claim 1 wherein said control unit is capable of reporting the result of judgment to [the] a user.

4. (Amended) The printing machine as claimed in claim 2 wherein said control unit is capable of reporting the result of judgment to [the] a user.

5. (Amended) The printing machine as claimed in claim 3 wherein said control unit is capable of reporting [the result of judgment to the user as well as] information of the penalty in throughput when a detected [current] error [as detected] is an error with which the printing operation of at least one of said image formation units can be continued.

6. (Amended) The printing machine as claimed in claim 4 wherein said control unit is capable of reporting [the result of judgment to the user as well as] information of the penalty in throughput when a detected [current] error [as detected] is an error with which the printing operation of at least one of said image formation units can be continued.

7. (Twice Amended) A method of reporting an error in [the] a printing machine having a plurality of image formation units each of which serves to perform [an] a printing operation on a printing sheet, and a printed sheet transportation unit which serves to transport the printing sheet from said image formation units to a common output location, said method comprising:

an error detecting step of detecting an error which occurs in said printing machine;

an error look-up step of looking up the error detected in said error detecting step in an error classified table stored on

a ROM;

an error judging step of judging whether or not [a current] the detected error [as detected by said error detecting step] is an error with which the printing operation of at least one of said image formation units can be continued while a printing operation of another of said image formation units must be halted or an error with which the printing operation of all of said image formation units [can not] must be [continued] halted; and

an error reporting step of reporting the error as detected in said error detecting step as well as information of whether or not the printing operation can be continued by said printing machine with the error.

8. (Amended) The method of reporting an error as claimed in claim 7 [wherein] further comprising reporting information of the penalty in throughput [is reported] when a detected [current] error [as detected] is an error with which the printing operation of at least one of said image formation units can be continued.